

REMARKS/ARGUMENTS

Claim 13 is withdrawn. No new matter has been added. Claims 1, 4-7 and 8-12 remain in the application. Reconsideration of this application is respectfully requested.

Rejection - 35 U.S.C. § 102(e)

Claims 1 and 4-12 were rejected under 35 U.S.C. § 102(e) as being anticipated by US 6,207,475 (Lin).

Applicants respectfully traverse the rejection. In the Office Action dated Dec. 13, 2006, the Examiner agrees that Lin teaches an "encapsulating layer between the silicon chip and organic substrate." The Examiner further agrees that Applicants' invention is preapplied in a controlled and fixed location to allow for more intimate contact to the substrate. The Examiner takes the position, however, that Lin's adhesive material would be capable of performing in the claimed manner. Applicants respectfully disagree and submit the following arguments to counter the Examiner's position.

Lin's underfill is not capable of performing in the claimed manner of Applicants' adhesive material. The adhesive material Applicants use is a highly viscous adhesive, for accurate control of laying down glue dots.... as described on page 4, lines 15-21. Based on the criteria set out on page 4, lines 6-14, Applicants' adhesive material is described as having a viscosity being "less liquid-like" and "more solid-like" during the application of the adhesive. Lin's underfill is more "liquid-like" - see col. 4, lines 67 which describes flowing an underfill material. Lin's underfill does what its name implies, it "fills" around and under gaps between a substrate and an IC. Lin's underfill is described in col. 2, lines 54-56 as being fed into the standoff "between an IC die and a substrate by the capillary effect on the underfill liquid." Applicants assert that the liquid-like consistency of Lin's underfill makes it too "runny" to remain in a predefined area prior to reflow (Applicants' claim 1). Lin's underfill is too runny and liquid-like to couple a preform to a substrate prior to reflow (as claimed in Applicants' claim 4). Lin's underfill can not maintain a geometry from pre-cure to post cure

(as claimed in Applicants' claim 7). Lin's liquid-like underfill can not be used to pre-attach or immobilize anything prior to curing (claim 8 pre-attaching and immobilizing the preform).

Applicants submit (via Supplemental IDS) an example of a suitable adhesive material which meets the parameters described on page 4, lines 6-14 (Loctite Technical Data Sheet Product 3619) which has a high viscosity of around 250,000 cps (similar materials range between 100,000 to 300,000 cps). Chip underfills used for direct chip attach (such as Lin's) have a low viscosity ranging between 3000-12000 cps.

Accordingly, the rejection under of claims 1 and 4-13 under 35 USC 102(e) is overcome.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

The Commissioner is hereby authorized to charge Deposit Account 502117, Motorola, Inc, with any fees which may be required in the prosecution of this application.

Respectfully submitted,

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